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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,443	04/20/2004	Gi-Hwan Bang	OI-0005	2783
34610	7590	11/16/2005		
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153				
			EXAMINER KOHARSKI, CHRISTOPHER	
			ART UNIT	PAPER NUMBER
			3763	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,443

Applicant(s)

BANG, GI-HWAN

Examiner

Christopher D. Koharski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/09/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.-
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 1, 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 04/20/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Specification

The abstract of the disclosure is objected to because the length exceeds the 150 word maximum, appropriate correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: the serial number is not present on correct of the first page of the specification. The title on the specification does not correspond with the oath/declaration; an amendment is needed to correct this (see MPEP § 605.02).

The specification should reference any foreign patent application if claiming the foreign priority date in the first paragraph. See 35 U.S.C. 119(e) for clarification.

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: page 2, 3rd paragraph "...in a shot time..." and "...reduces metal burden on its safe use..." Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claim 1 is objected to because of the following informalities: language used seems to be poorly translated and incorrect, for example "...hollow portion formed adjacent the loading means surround the circumference..." Appropriate correction is required.

Claim 4 is objected to because of the following informalities: the wording used to define the grooves in the piston portion is not concise, the following is suggested: "... the piston portion includes at least one groove formed around the outer circumference thereof, in which a sealing member is fitted in one groove to be movable in the cylinder and an annular projector from the cylinder can be coupled with another groove in said piston portion..."

Claim Rejections - 35 USC § 103

Claims 1, 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richard (4252118). Richard discloses a cylinder (22) including a jet spraying nozzle (27) with a loading means (24). A piston portion fixed to a predetermined location (40) so that a separate chamber is formed (32) and a push rod fitted into the cylinder spaced away from the piston portion (54) is also disclosed. The elements (40, 54) in the Richard reference both contain grooves that allow the push rod and piston to be integrally coupled when the push rod portion is forced through the cylinder. The Richard reference does not disclose expressly the hollow portion formed adjacent to the nozzle. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the top portion of the

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chamber with a hollow cavity, because the applicant has not disclosed that the hollow portion provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the applicant's invention to perform equally well without the mentioned hollow top portion adjacent to the nozzle. Therefore, it would have been an obvious matter of design choice to modify Richard to obtain the invention as specified in claim 1.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richard in view of Kirchhofer et al (5611786). Richard discloses the claimed invention except for the cutter mounted at the lower edge portion of the nozzle. Kirchhofer teaches that it is known to use means for piercing an ampoule using a cutting means attached to the top portion of a syringe (col 1, ln 15-20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the syringe device as taught by Richard, with the cutting element as taught by Kirchhofer since such a modification would provide the syringe device with the ability to puncture a membrane bound component as described for providing a sealable but accessible drug storage area to reduce the amount of leakage and aid in drug shelf life longevity.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richard in view of Tober et al (5681292) and Epperson (6248094). Richard discloses the claimed invention except for the specific mentioned sealing member fitted in one groove of the piston element to be movable in the cylinder along with an annular projector from the cylinder coupled to another piston element groove for fixation. Tober teaches that it is known to use an element (62) on the piston head against the shaft to provide a means

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for proper sealing above a regular friction fit and to allow the piston head to not be completely made from a rubber like material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the piston head as taught by Richards, with an o-ring type element as taught by Tober since such a modification would provide the piston head with added leakage resistance and allow for a different piston head material for construction. Richard discloses the claimed invention except for the annular fixing projections. Epperson teaches that it is known to use external circumferential groove as set forth Figure 3 (30) to provide fixation for that piston type element. It would have been obvious to one having ordinary skill in the art at the time the invention was made to again modify the piston head as taught by Richard, with the circumferential groove as taught by Epperson, since such a modification would provide the piston head with a groove coupling system for providing a means for fixing the piston head at a predetermined position.

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richard in view of Yeager et al (6224573). Richard discloses the claimed invention except for the rib projected around the outer circumference of the push rod and a corresponding rib on the cylinder. Yeager teaches that it is known to use concentric rings as seen in the elements in Figure 2 (82, 102) to provide to fix and stabilize the piston in a certain position. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the piston element as taught by Richard, with the concentric rings as taught by Yeager, since such a modification would

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provide the piston with grooves for providing a fixation to the side of the cylinder or allow for a friction fit into the cylinder.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil et al (5637087) in view of D' Angelo (2470293) and Green (4648532). O'Neil discloses the claimed invention with a cap portion (18) with a threaded portion (14,15) with a cylinder body (12) and push rod portion (44) with the exception of the cap portion with the female engagement and a membrane member that seals the lower opening on the cap. D' Angelo teaches that it is known to use a threaded cap portion as set in Figure 2 element (5) for the purposes of loading a medicament into the device. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the threads on the cap portion, because the applicant has not disclosed that the hollow portion provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the applicant's invention to perform equally well without the mentioned reversal of threads. Therefore, it would have been an obvious matter of design choice to modify D' Angelo to obtain the invention as specified in claim 7. It would have also been obvious to one having ordinary skill in the art at the time the invention was made to modify the cap portion as taught by O'Neil, with the threaded cap as taught by D' Angelo since such a modification would provide the device with the modified cap portion for providing a means for effective loading and removal of the cap portion for different applications. Green teaches that it is known to use a membrane to be punctured as set forth in Figure 1 element (15) to provide for the

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compartmentalization of a material until needed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cap portion as taught by O'Neil with a membrane material as taught by Green since such a modification would provide the cap portion with a sealed membrane that could be broken for use to prevent leakage and maintain material storage.

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. Kaufman (2059966) is another device that uses a piston setup with a nozzle-type top portion to dispense material in specific areas of the body.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D. Koharski whose telephone number is 571-272-7230. The examiner can normally be reached on Monday through Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nicholas Lucchesi can be reached on 571-272-4977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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